substituted benzoin (C_6H_5-CO-CH-(OH)-C_6H_5), 4,4'-substituted benzil (C_6H_5-CO-CO-C_6H_5), 4,4'-substituted benzophenone (C_6H_5), 4,4'-substituted diphenylmethane (C_6H_5-CH_2-C_6H_5), 4,4'-substituted stilbene (C_6H_5-CH=CH-C_6H_5), 1,3-substituted-allene (CH_2=C=CH_2), and wherein said oligo- or polynucleotide is covalently bound to a functional group of said bifunctional-linker through a primary amino group attached, on the e-' or 5'-terminus through an alkane having a length of from 60 to 18 methylene groups or though a polyether with from 2 to 20 repeating units

and wherein the oligo- or polynucleotides are prepared by amplification.

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COSH

12. The support according to claim 11, characterized in that said oligo- or polynucleotide is RNA, DNA or PNA.

13. The support according to claim 11, characterized in that said support is made of glass or another material mainly consisting of silica.

14. The support according to claim 11, said bifunctional spacer having the following structure:

$(XO)_3$ Si-Y-Nu,

wherein

X = C_1-C_3 alkyl,

Y = C_2-C_4 alkylene,

Nu = a nucleophilic group such as $-NH_2$, -NHR, with

R = $-CH_2-CH_2-NH_2$, $-CH_2-CH_2-NH-CH_2-CH_2-NH_2$, $-CO-NH_2$ or SH.

15. The support according to claim 11, wherein said spacer is $(MeO)_3Si-CH_2-CH_2-CH_2-NH_2$.

16. The support according to claim 11, characterized in that said homobifunctional linker selected from the group consisting of 1,4-disubstituted benzene, 2,7-substituted fluorene, 2,6-substituted naphthalene, 2,6-substituted anthracene, 2,7-substituted phenanthrene, 4,4'-substituted biphenyl, 4,4'-substituted benzoin ($C_6H_5-CO-CH(OH)-C_6H_5$), 4,4'-substituted benzil ($C_6H_5-CO-CO-C_6H_5$), 4,4'-substituted benzophenone ($C_6H_5-CO-C_6H_5$), 4,4'-substituted diphenylmethane ($C_6H_5-CH_2-C_6H_5$), 4,4'-substituted stilbene ($C_6H_5-CH=CH-C_6H_5$), 1,3-substituted allene ($CH_2=C-CH_2$) comprise functional groups selected from:

- aldehydes and ketones;
- isocyanates, isothiocyanates;
- carboxylic acids;
- carboxylic acid derivatives.

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17. The support of claim 16, wherein the carboxylic acid derivatives are selected from

a) carboxylic acid esters;

b) carboxylic acid chlorides (R-COCl);

c) carboxylic acid azides ($R\text{-}CON_3$);

d) mixed anhydrides with carbonic acid monoester ($R\text{-}CO\text{-}O\text{-}COR'$).

18. The support of claim 17, wherein the carboxylic esters are selected from methyl esters, ethyl esters, activated esters and esters of p-nitrophenol or –hydroxysuccinimide.

19. The support of claim 11 wherein the support does not comprise a polyT-spacer.

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20. The support of claim 11 wherein the number of different oligo- or polynucleotides is at least 72.

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21. The support of claim 20, wherein the number of different oligo- or polynucleotides is at least 439.

22. Method for identifying and quantifying polynucleotides by labeling the polynucleotides to be analyzed, followed by a hybridization reaction on the support according to claim 11.

23. A method for establishing transcription profiles in which:

homologous regions of mRNA from a target species and at least one model species are selected;

amplification primers allowing the amplification of nucleic acids having a length of from 200 to 600 bp, from the homologous regions of both the mRNA from said target species and the mRNA from said at least one model species are selected, the amplification primers having a maximum of 1 mismatch per 6 nucleic acids of the amplification primer;

corresponding nucleic acids having a length of from 200 to 600 bp for said target species or said at least one model species are amplified by amplifications using the amplification primers, and the nucleic acids obtained are immobilized on at least one support;

said at least one support is incubated with a DNA or RNA sample to be analyzed, and the quantity of bound DNA or RNA is determined.

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24. The method of claim 23, wherein the nucleic acid have a length of 200 to 400 bp.

25. A method for the preparation of a support according to claim 11, wherein:

said spacer in a polar aprotic solvent is applied to the major surface of the support, followed by removing any excess of unreacted spacer;

said linker is dissolved in an anhydrous polar aprotic solvent and reacted with the spacer bound to said major surface;

the oligo- or polynucleotide modified with an amino group at its 5'- or 3'- terminus through an alkylene group is taken up in a buffer and incubated on said support for binding the oligo- or polynucleotide to a free group of the bifunctional linker, optionally followed by removing any excess free groups of the bifunctional linker; and

the oligo- or polynucleotide bound to the support is denatured.

REMARKS

A new Abstract is submitted, hereby, as required in the Office Action.

Claims 11-25, presented hereby in place of claims 1-10, are pending.

Claim 11 represents claim 1, amended to incorporate features of claim 7 and, furthermore, to recite that the oligo- and polynucleotides are prepared by amplification. Claim 25 corresponds to claim 10. Support for the remaining claims presented, hereby, is discussed below, in the context of addressing the issues raised in the Office Action.

Reconsideration of the rejection of claim 8 under 35 USC 101 is requested. Claim 22, presented hereby, corresponds to claim 8, amended to overcome the rejection under §101.

Reconsideration is requested with respect to the rejection of claims 4, 5, 6, 8, 9, and 10 under 35 USC 112, ¶2.

Claims 14 and 15 correct the errors in claims 4 and 5; "O" represents oxygen, not a variable.

Claims 16, 17, and 18 represent the subject matter of claim 6.